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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/739,802	12/20/2000	Kazuo Takaoki	2185-0495P	4025

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EXAMINER KUJAR, ANTHONY J

ART UNIT 1754	PAPER NUMBER
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12

DATE MAILED: 01/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n No.

09/739,802

Applicant(s)

TAKAOKI ET AL.

Examin r

Anthony J Kuhar

Art Unit

1754

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11/4/02.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8,9,12,13 and 16-23 is/are pending in the application.
- 4a) Of the above claim(s) 24-31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8,9,12,13 and 16-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- ☐ Interview Summary (PTO-413) Paper No(s). _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other:

DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of Group I in Paper No. 8 is acknowledged. The traversal is on the ground(s) that the catalyst of Group I is required in the process of Group II, so that the search of the catalysts would be pertinent to an examination of the process of the second group and thus pose no undue burden of search on the examiner. This is not found persuasive because ~~examiner~~ the search required for Group II is not required for Group I and therefore would be an undue burden of search on the examiner. The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 8, 9, 12, 13, and 6-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 8 and 9, the phrase "and u-oxo type compounds" is indefinite as it is ungrammatical and unclear as to how this compound fits in with the rest of the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 8 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by EP 0 683 184 A1.

EP '184 teaches a polymerization catalyst containing a transition metal compound from groups 3 to 10 of the periodic table or a metal or the lanthanide series (see page 18, lines 10-13). Formulas I and IV in the instant prior art teach substituted unsaturated cyclic hydrocarbon groups that bond with the transition metal such as cyclopentadienyl groups which may be substituted with a heteroatom such as phosphorus or nitrogen. Also connected with the transition metal can be σ -bond ligands such as a halogen or hydrocarbon group. Formula V on page 20 shows substituted or unsubstituted cyclopentadienyl groups may form a conjugated structure around the metal. Metallocenes are given as examples on page 26, lines 42-47.

An additional catalyst component is disclosed on page 25. These contain transition metals from groups 5 to 15. Page 25, line 30 teaches these compounds may contain large cyclic ligands such as a phthalocyanine or tetraphenylporphyrin group. Disclosed as a porphyrin compound is tetraphenylporphyrinzinc chloride tetrakis pentafluorophenyl borate, which is a structure substantially similar to that of formula II in the instant application, with zinc being a group 12 element (see page 26, lines 43-50).

Further disclosed is an aluminoxane as another possible catalyst component (see page 25, line 2).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 8, 9, 12, 13, and 16-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 0 683 184 A1 in view of Manassen et al.

EP '184 teaches a polymerization catalyst containing a transition metal compound from groups 3 to 10 of the periodic table or a metal or the lanthanide series (see page 18, lines 10-13). Formulas I and IV in the instant prior art teach substituted unsaturated cyclic hydrocarbon groups that bond with the transition metal such as cyclopentadienyl groups which may be substituted with a heteroatom such as phosphorus or nitrogen. Also connected with the transition metal can be σ -bond ligands such as a halogen or hydrocarbon group. Formula V on page 20 shows substituted or unsubstituted cyclopentadienyl groups may form a conjugated structure around the metal. Metallocenes are given as examples on page 26, lines 42-47.

An additional catalyst component is disclosed on page 25. These contain transition metals from groups 5 to 15. Page 25, line 30 teaches these compounds may contain large cyclic ligands such as a phthalocyanine or tetraphenylporphyrin group. Disclosed as a porphyrin compound is tetraphenylporphyrinzinc chloride tetrakis pentafluorophenyl borate, which is a structure substantially similar to that of formula II in the instant application, with zinc being a group 12 element (see page 26, lines 43-50).

Further disclosed is an aluminoxane as another possible catalyst component (see page 25, line 2). EP 0 683 184 A1 does not teach adding an electron withdrawing group to the tetraphenylporphyrin compound of EP 0683184 A1.

However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the phthalocyanine/ porphyrin complex of the EP reference to form electron withdrawing groups as claimed by applicant because Manassen et al. teaches in column 2 of page 133 that electron attracting fluorine substituents greatly influenced the catalytic activity of phthalocyanine complexes in such a way that progressive fluorination of iron and

Art Unit: 1754

cobalt phthalocyanine caused a decrease in activity, followed by an increase in activity at higher degrees of fluorination. One of ordinary skill of the art would have been motivated to do this because an increase in activity of the catalyst would mean better performance during polymerization.

Response to Arguments

Applicant's arguments with respect to claims 8, 9, 12, 13, and 16-23 have been considered but are moot in view of the new ground(s) of rejection. Examiner also notes that claims 8 and 9 do not require an electron withdrawing group as indicated by applicant. Examiner also notes the experiment conducted in the 132 Declaration. However, claims 8 and 9 do not require the electron withdrawing group shown to increase catalyst activity in applicant's experiment, and this also does not obviate the prior art rejection where Manassen et al. teaches electron withdrawing groups increase the activity of phthalocyanine catalysts. An attempt was made to reach the applicant's attorney to schedule a personal interview; however, no response was received.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony J Kuhar whose telephone number is 703-305-7095. The examiner can normally be reached on 8:45 am - 5:15 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stan Silverman can be reached on 703-308-3837. The fax phone numbers for the

Application/Control Number: 09/739,802

Page 7

Art Unit: 1754

organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-305-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

AK

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January 2, 2003



**STEVEN BOS
PRIMARY EXAMINER
GROUP 1100**